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ABSTRACT

Topics selected for this workshop reflect the growing concern for the role of the library media specialist as an integral member of the school's instructional team, working cooperatively with administrators, teachers, students, and members of the community in the evaluation, selection, and use of resources which support and enrich learning activities. In the first session Dr. Donald Ely and Dr. Margaret Chisholm addressed techniques, methods, and a procedure for the design, development, and selection of instructional strategies, and the relationship of media to this process. Dr. Joseph Bondi opened the second session with a presentation on the relationship of middle school programs to the library media center to serve as a guide for programming, and the instructional role of the school media specialists in personalizing instruction for the middle school learner was the focus of the last paper by Dr. Shirley Aaron. (JEG)

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ISSUES IN

MEDIA MANAGEMENT

1978 SERIES

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Maryland State Department of Education
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Foreword

A quality school library media program is a prerequisite for achieving educational excellence. Individualized instruction, independent learning programs, and other teaching methods require that users have immediate and easy access to a wide range of services and materials that meet the varied needs, interests, and abilities of each student. The school library media program is a service to the school's instructional program and also serves as a teaching component of that program.

Today's library media specialist must be an integral member of the school's instructional team, working cooperatively with administrators, teachers, students, and members of the community in the evaluation, selection, and use of resources which support and enrich learning activities. The library media staff must be able to deliver a program of activities which satisfy the user's needs.

The school library media specialist must function, foremost, as a teacher, maintaining a secondary role as an information provider. As information managers we must assist our many users to use information in the best way possible to manage their present and cope with their future needs--always remembering that the media merely conveys information. Our concern, then, must be the best way to make information available and to help individuals and groups make sound decisions about this information.

The two topics selected for this year's Issues in Media Management Workshop Series reflect the growing concern of the teaching role of the library media specialist. The first addresses techniques, methods, and a procedure for the design, development, and selection of instructional strategies and the relationship of media to this process.

The second session focuses upon the school library media program and the middle school. Currently, there exist few published materials relating to these two areas. Therefore, it was felt that the library media supervisors would benefit from such a discussion.

The assistance of Elsie Lawson, Specialist, Staff Development, is greatly appreciated for she ably and willingly assisted in the planning and directing of these two inservice experiences. Without her leadership, the Series would not have been possible.

David R. Bender
Administrator

INSTRUCTIONAL DESIGN

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THE FRAMEWORK FOR INSTRUCTIONAL DESIGN:

SOME QUESTIONS AND ANSWERS

The term "instructional design" is used with increasing frequency in educational circles. It is often confused with such terms as instructional development, materials design, and curriculum design. Before reading further, how would you define instructional design? Have you ever seen instructional design in operation? This paper is an attempt to address some of the contemporary concerns regarding instructional design and its evolution in education in a question-and-answer format. Having read this paper, you should be able to describe instructional design and to determine what role a library media professional should play in the process.

The questions and answers which follow are developed from an analytical viewpoint. They are not based on theory but on practice. This pragmatic perspective should assist library professionals in determining an appropriate role to play in the process of instructional design.

Question 1: What are the current definitions of instructional design?

Start with your own definition. What is instructional design? Experts in the field of educational psychology, learning theory, and educational technology define this term in a variety of ways. Here is a sampler:

from Kemp -

> . . . a realistic plan for designing improved instruction that may be applicable today by instructional staffs in any school. It can build on the old, making use of familiar language. It can draw from valuable experience in such areas as programmed instruction (objectives specification, small-step subject-matter presentation, and continual evaluation of student learning), and audiovisual materials, production techniques (primarily production planning for motion pictures and television), and it can incorporate important elements from the systems model.

from AECT -

> The part of the instructional development process that is analogous to the Design Function of the Domain of Educational Technology model; i.e., the generation of specifications for Learning Resources/ Instructional Systems Components. (Not synonymous with, though often confused with, instructional development and instructional product development.)

from Diamond, et.al. -

> (1) project generation and selection,
> (2) basic design inputs,
> (3) preliminary component outline, and
> (4) operational sequence.

from Davis, et.al. -

> . . . the word <u>design</u> is used when referring to learning systems, in precisely the same sense as it is used when one speaks of <u>designing</u> an information processing system. Good system design implies the careful specification of requirements and objectives, the systematic analysis of these objectives to specify alternative approaches to achieving them, the development of a system to meet the objectives, and the evaluation of its performance.

from Gustafson -

> . . . specifying all instructional strategies and leads to arranging and sequencing both human and non-human resources.

from Banathy who asks:

> (1) What has to be done to enable the learner to master the task?
> (2) Who or what has the capability of doing whatever has to be done?
> (3) Who or what will do exactly what?
> (4) When and where will they do it?

from Merrill and Tennyson -

> . . . means selecting and arranging instructional materials in a way which helps students learn more efficiently and effectively than they would from a natural situation. It also means selecting and arranging special materials which allow you as a teacher, or the students as learners, to find out whether they have learned what you intended.

As you can see from the above definitions, there are some consistent concepts which run through most of the definitions. They include: a systematic arrangement of a variety of materials, messages, methods, and personnel. We will use the following definition: Instructional design is the process of selecting, planning, and using instructional strategies and media based on instructional objectives.

Question 2: What is the relationship between instructional systems and instructional design?

An instructional system is much more encompassing than instructional design. An instructional system would include a comprehensive arrangement of a curriculum or a course of study. Instructional design is much more focused. It can concentrate on a smaller segment such as an instructional module or a single-class session. Instructional design is a subset of instructional systems.

Question 3: How does "instructional development" relate to instructional design?

Instructional development and instructional systems are closely related. An instructional system is the tool used in the process of instructional development. In the broadest sense, instructional development is a process whereby all elements which relate to teaching and learning are systematically brought together from an early assessment of the definition and needs of the problem through the development of goals and objectives and actual design itself, and, finally, to the point of evaluation and recycling for the purposes of improvement. Instructional development is a process which includes many interrelated

steps. One instructional development model taken from the Instructional Development Institute[1], is shown below. It offers a comprehensive plan for organizing the elements which go into the efficient and effective planning of instruction.

Question 4: What has been the evolution of instructional design?

For years teachers have developed lesson plans. They have used a variety of resources and teaching strategies to communicate content to students. In that sense, the planning for teaching and learning has been with us for a long time. However, in more recent years the focus on accountability in education and the promotion of teaching by objectives has created a climate in which instructional design has come to play a critical role. Objectives have been the starting point for designing instruction in more recent years, and it is in this sense that a systematic procedure has been developed for selecting appropriate strategies and instructional media to achieve desired objectives. Notable instructional design efforts have evolved in some of the developments of new national curricula in such areas as physical sciences, social sciences, and humanities.

Some people refer to instructional design as product development or refer to it as the creation of learning activity packages. Learning activity packages and self-contained modules can be considered examples of the results of instructional design. However, the instructional design cycle is not complete until it is used by the learner, usually under the guidance of a teacher, evaluated and modified as necessary to meet the needs of the learner.

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[1]The Instructional Development Institute is an inservice program designed and managed by the University Consortium for Instructional Development and Technology (Indiana University, Michigan State University, Syracuse University, University of Southern California and U.S. International University).

Question 5: What role has traditional librarianship played in this development?

The librarian has served as a resource person in the creation of new instructional designs. As teachers and curriculum specialists have developed new modes of teaching, the librarian has been consulted from time to time for resources which can be used within the design of instruction. This role has been more or less passive. Usually the librarian has not been involved until a request for service has been made. In some cases more active librarians have sought opportunities to contribute to instructional design.

Question 6: What role has the audiovisual field played in this development?

One major dimension of most instructional design is the use of media. Just as a traditional librarian waited to be called upon, the traditional audiovisual specialist waited to be called upon to deliver the nonprint media which would help to carry the messages of the instructional design. As new materials were needed, the audiovisual specialist had the equipment and expertise to create slides, tapes, or films.

Question 7: What is the current status of instructional design?

The instructional design process is carried on in local schools by teachers and resource people who design individualized learning materials as well as in team-teaching procedures. Instructional design occurs most frequently when a person who is knowledgeable in instructional and learning theory uses principles from these theories to create instructional packages and instructional programs. The library media professional (whether a traditional librarian or an audiovisual specialist) serves on the design team as a proactive resource person who not only recommends resources but also recommends teaching procedures and evaluation approaches. In some cases the library media professional might initiate the process.

Question 8: Why should library media professionals become involved?

Library media professionals must become informed and involved in the process for in many cases it means survival. The process of instruction will continue into the future and those who are active in its design are those who will continue to survive. The concept of involvement in the educational process has always been promulgated and encouraged but never implemented to the optimum. School library media professionals are teachers and, therefore, need to be involved in the teaching and learning process. Their training and experience provide a unique resource on the instructional design team which can rarely be provided by any other professional.

For many years we have talked about the three R's - getting the right material to the right place at the right time. We must now add a fourth R - to help the teacher and learner to use the media in the right way. It is possible that many of the functions which are now performed by traditional librarians and audiovisual specialists can be handled by clerks and technicians. Therefore, in order to justify a professional position, it is incumbent upon library media professionals to use the talents which they have to become active members of the instructional team.

Question 9: What should a contemporary library media professional do about instructional design?

First of all it is necessary to know what instructional design is all about and how to do it. This may come about through inservice workshops such as Instructional Development Institutes or through college or university courses. The skills may also be acquired from working with a person who has been involved in instructional design activities. However, before becoming part of a team, the first step is to become competent in the instructional design process.

In serving on an instructional design team, the library media professional can make unique contributions in terms of recommending teaching procedures and resources which will help learners to attain instructional goals. If the library

media professional is not asked to participate on such teams, he/she should volunteer to serve on them. Very often teachers and administrators do not realize the contributions which can come from library media professionals, and we need to involve ourselves in projects which draw upon our competencies.

Question 10: What is the ideal role?

The library media professional should automatically become a member of the instructional design team. As a person in the school who has knowledge of a wide range of resources and ways in which these resources might be used effectively, there is a unique contribution to be made. The library media professional should be involved from the beginning of the project and not as an afterthought. The library media professional should help to create materials which do not exist as well as to identify those which do. The days of preparing a bibliography and selecting a few items off the shelf which might add to the course are gone. The proactive library media professional is a co-equal member of curriculum and instructional design teams and, as such, must be prepared to assume new responsibilities and roles far beyond those which have been traditionally followed.

At a time when schools appear to be static, the library media field must not simply survive; it must help to move schools ahead. Innovative suggestions for new ways to teach and to learn should come from the library media field. In the past we have been largely concerned with the things of teaching and learning; we must now become more actively concerned about the process itself. Instructional design is one aspect of the new role of the library media professional.

The next section deals with the instructional design process, itself, and one aspect of the process which is especially relevant to the concerns of the library media professional, selecting instructional strategies and library media.

THE INSTRUCTIONAL DESIGN PROCESS

There are many approaches to instructional design. There are many variables which must be considered in the process. In this section we will explore one such program which is generic to many approaches. It is but one program. It may not be the best program, but it does illustrate the dimensions of the instructional design process. The program is the Instructional Development Institute (IDI) which was planned, developed, tested and is now managed by the University Consortium for Instructional Development and Technology (UCIDT).[2] The IDI is a forty-hour training program designed to provide teams of teachers, administrators, community members, and specialists with initial skills in applying an instructional system approach to developing practical solutions to critical teaching and learning problems. The purpose of the IDI program is to assist school systems with limited resources, substantial numbers of academically or culturally deprived students, and in finding innovative and effective solutions to problems related to teaching and learning.

Contents of the IDI

The basic content of the IDI is a synthesis of various models of instructional design. A three-stage, nine-function model (Figure 1) was developed which contained the components necessary for effective development and presented these components or steps concisely so that it would be useful to practicing educators.

It should be pointed out that while the UCIDT developers felt the model contained the critical elements for effective instructional design, they were aware that presentation of the model as nine linear lock-step functions was not an accurate representation of the instructional design process. The instructional design process is in fact a dynamic, complex interplay among a vast number of variables which defies strict prescriptive interpretation. Experienced

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[2]The authors gratefully acknowledge the permission given by UCIDT to quote from the IDI materials.

instructional developers point out that they seldom follow the model in lock-step fashion; rather, the model serves as a reminder that each of the component functions must be attended to at some stage in the development process to insure that validated results are produced.

The model is composed of three major stages - Define, Develop, and Evaluate - each of which is composed of three functions or tasks. In the Definition stage, the three functions of instructional development are to (1) define the problem, (2) analyze the setting, and (3) organize the management. The define-the-problem function requires a careful analysis of the present educational system, an equally sensitive delineation of the ideal system, and, after noting the differences between the present conditions and the projected ideal state, a setting of priorities to determine which problem to tackle to move the system closer to the ideal. The second function, analyze the setting, calls for a thorough investigation of the audience (i.e., students) affected by the problem, the condition, or environment in which it exists and the potential resources to help alleviate the problem. The goal of the next function, organize the management, is to organize effectively teams of teachers, administrators, specialists, and community representatives to work cooperatively to bring about the desired changes. Tasks and responsibilities must be assigned to appropriate team members and, to assist in organizing the work, time lines must be established.

The three functions in the Development stage are to (1) identify the objectives, (2) specify the methods, and (3) construct the prototype. The identify the objectives function requires the development of behavioral objectives for the student so that when the desired behavior is performed it will serve as evidence that the instructional problem is moving towards solution. Objectives must be written in terms of both the desired terminal student behavior and the enabling or lower-level skills. The specify methods function suggests that appropriate teaching/learning strategies, including instructional media, can be identified which are likely to assist the student in mastering the specified objectives. Completion of the last function of the Development stage, construct the prototype, requires the actual production of a first-draft version of the instructional materials and the evaluation instruments which will be used to assess them.

Figure 1

THE INSTRUCTIONAL DEVELOPMENT SYSTEM

STAGE I: DEFINE		
FUNCTION 1:	FUNCTION 2:	FUNCTION 3:
IDENTIFY PROBLEM	ANALYZE SETTING	ORGANIZE MANAGEMENT
Assess Needs Establish Priorities State Problem	Audience Conditions Relevant Resources	Tasks Responsibilities Time Lines
STAGE II: DEVELOP		
FUNCTION 4:	FUNCTION 5:	FUNCTION 6:
IDENTIFY OBJECTIVES	SPECIFY METHODS	CONSTRUCT PROTOTYPES
Terminal Enabling	Learning Instruction Media	Instructional Materials Evaluation Materials
STAGE III: EVALUATE		
FUNCTION 7:	FUNCTION 8:	FUNCTION 9:
TEST PROTOTYPES	ANALYZE RESULTS	IMPLEMENT/ RECYCLE
Conduct Tryouts Collect Evaluation Data	Objectives Methods Evaluation Techniques	Review Decide Act

The Evaluation stage also has three functions, namely to (1) test the prototype, (2) analyze the results, and (3) implement/recycle. The test the prototype function specifies that evaluation data must be collected by testing the prototype material on a sample population of students for whom the objectives and teaching/learning strategies were devised. In the next function, analyzing the results, the data collected during the tests are analyzed in terms of objectives, methods, and evaluation techniques. The final function, implement/recycle, can be completed after careful analysis of all data collected during the prototype testing. The decision is then made whether or not to recycle back through appropriate functions in the model or whether or not to implement the system on a full-scale basis. Recycling is necessary if all objectives have not been achieved at the desired level, while implementation raises the need for training and other activities necessary to integrate the new system into the existing one.

Briefly described, the model of instructional design outlined above is characterized by a careful analysis and identification of the instructional problem; an assessment of manpower and resource requirements; the formulation of specific objectives to meet the problem; the selection of viable teaching alternatives; tryout, revision, and retesting of the alternatives; and continuous monitoring of the new instructional system as a whole as well as evaluation of the separate components of the system. Only through such systematic procedures can the goal of instructional design be realized, namely, to improve each learner's opportunities to obtain a high quality of education.

Selecting Media

It would be nice if there were a formula to follow which would insure selection of the best medium for each teaching situation. There is no such formula but procedures have been developed which provide general guidelines.

In 1972, the National Special Media Institutes (now the University Consortium for Instructional Development and Technology) published Selecting Instructional Strategies and Media: A Place to Begin by M. David Merrill and A. Irwin Goodman.[3]

[3]The key ideas in this section come from Selecting Instructional Strategies and Media which was commissioned by the Consortium and reviewed by professionals at a conference sponsored by UCIDT.

A group of library media professionals assisted with the basic design and writing of the manual, thus enabling the procedures described to reflect the best research available and describe the experiences of library media professionals. The publication has been used extensively in Instructional Development Institutes and workshops throughout the United States and in several countries of the world.

The process for selecting instructional strategies and media accepts Gagne's premise that "No single medium is likely to have properties that make it best for all purposes." The process, as developed in the Merrill and Goodman manual is extensive and comprehensive. For a person to gain an adequate level of competency in selecting instructional strategies and media requires participation in a one-day workshop and follow-up activities subsequent to the workshop. Therefore, the procedure described in this section must be considered as a digest or outline of the complete process. It is necessary to refer to the manual for all the details and, even more helpful, would be participation in an Instructional Development Institute or Strategies and Media Workshop.

The Four-Step Process

To carry out the media selection rule, a four-step process is recommended:

1. Write an objective;
2. Determine the domain in which the objective can be classified: cognitive, affective, psychomotor;
3. Select an appropriate strategy within the domain determined in step 2; and
4. Select appropriate media.

Step One: Write an Objective. You should have no trouble writing an objective according to the recommended format. Remember the four distinguishing characteristics of a good objective:

1. It describes something which the learner does or produces.

2. It states a behavior or product of the learner's behavior.

3. It states the conditions under which the behavior is to occur.

4. It states the standard which defines whether or not the objective has been attained.

If you are in any doubt about the nature and function of objectives, refer to Robert Mager's book, Preparing Instructional Objectives. It would be helpful at this point if you wrote or selected an instructional objective which meets the above criteria.

Step Two: Determine the domain in which the objective can be classified: cognitive, affective, psychomotor. Examine an objective. There are three categories into which most objectives fall. Briefly, cognitive objectives pertain to the recall or recognition of knowledge and the development of intellectual skills and abilities. Affective objectives pertain to interests, attitudes, and values and the development of appreciations. Psychomotor objectives pertain to the manipulative or motor-skill area.

While most objectives contain all three categories to some degree, there is usually one primary category which can be emphasized.

Step Three: Select an appropriate strategy within the domain determined in step two. This activity will be a new task for many library media professionals. After the domain into which the objective can be classified has been determined, we still need to make a further decision. This will call for the choosing of an instructional strategy. An instructional strategy clarifies the procedure to be used in helping learners to acquire the objective.

In the Cognitive domain, there are five strategies:

1. Identifying
2. Naming
3. Describing
4. Ordering
5. Rule-using

The objective you have written (or selected) in this domain should fall primarily into one of the five strategies. It may overlap to some extent but one strategy will probably be dominant. Consider the operational definition of each strategy before determining where your objective fits.

1. Identifying - a learner indicates membership or nonmembership of specified characteristics, objects, or events in a class when the name of that class is given. Synonyms include select, recognize, match, and classify.

2. Naming - a learner supplies a label for a specific characteristic, object, or event. It means recall of symbols or details of events. Synonyms include label and list.

3. Describing - a learner reports object properties, events, event properties, and/or relationships relevant to a given characteristic, object, or event. Synonyms include define, explain, and demonstrate.

4. Ordering - a learner arranges two or more things in a specified sequence. Synonyms include alphabetize, ranks, and list in sequence.

5. Rule-using - a learner solves a problem which requires two or more steps to arrive at the solution. (Synonyms include solve, apply (a principle or law).

In the Affective domain, there are two strategies:

1. Interest or motivation

2. Attitude or value

In the process of media selection, the operational definitions in the affective domain are as follows:

1. Interest or motivation - a learner expresses preference for an object or activity or engages in behavior which leads to attaining an object or participating in an activity. Interest or motivation may be observed by noting increased persistance at a task or by voluntarily participating in a task with increasing frequency.

2. Attitude or value - a learner expresses feelings towards or a position on a specific matter and is consistent in expressing this feeling or position. Actual behavior is consistent with the expressed feeling or position. Attitude or value may be observed by voluntarily selecting activities which are consistent with a previously expressed feeling or position.

In the Psychomotor domain, there are three strategies:

1. Self-paced

2. Mixed-paced

3. Externally-paced

Operational definitions of these three strategies are as follows:

1. Self-paced: a learner and an object to be manipulated are at rest prior to the initiation of motion. The learner moves the body or part of the body when ready and at the learner's own speed. During the process there is contact, manipulation, control, or movement of a stationary object. An example would be typing on a typewriter. The learner begins the movement of the arms and the fingers using a stationary object.

2. Mixed-paced: a learner or an object to be manipulated are in motion at the outset of an action. If a learner interacts with a stationary object while his/her body is in motion or interacts with a moving object while the body is stationary, this is a mixed-paced activity. An example would be hitting a softball in motion while the player is standing in a fixed position.

3. Externally-paced: a learner and an object to be manipulated are both in motion at the beginning of an action. If a learner executes a series of movements while he/she and an object are in motion, this is an externally-paced activity. An example would be a football player who is running downfield to catch a forward pass.

Step Four: Select appropriate media. At this point we have an objective (Step One), classified according to the best domain (Step Two), and the further specification of a strategy which best fits the objective (Step Three). Now, how do we get from here to selecting the best medium?

We must next consider the characteristics of students which directly relate to learning such as verbal abilities, visual and audio-perception skills, experience, intelligence, motivation, personality, and social skills. In other words, any special factors which help to narrow the selection should be used. Then we can go to a chart (Figure 2) which provides suggestions for each strategy in a medium-by-medium format.

Figure 2

SELECTING MEDIA ACCORDING TO LEARNING STRATEGY

In the left column locate the learning strategy that you previously selected. Then, considering your objective and learning strategy, note how objects, still and motion pictures, audio media, and written materials can best be used either alone or in combination.

LEARNING STRATEGY	OBJECTS	STILL PICTURES
Identifying Strategy	If the concept is an object, display a variety of examples and non-examples and point out the relevant attributes.	If the concept is an unaccessible object or an event, display a series of pictures of the object or event while pointing out relevant characteristics.
Naming Strategy	If the objective specifies the naming of objects or parts of objects, display required objects and name them, their characteristics and functions.	If still pictures would be the most efficient way of presenting objects, display the pictures and point to the object or parts on the pictures naming them and describing their characteristics and functions.
Describing Strategy	Display objects connected with a specific event, explaining how the objects relate to it. Develop student interest in the objects by describing and illustrating their use.	Display a series of still pictures that illustrate a specific event, episode, relationship, or sequence. Provide names and discuss the relationships and sequence in which the events occur as illustrated by the pictures.
Ordering Strategy	Display a number of objects and ask students to place in order (of age, of hardness, of size).	Scramble a set of still pictures and ask students to order them in correct sequence.
Rule-Using Strategy	If the rule involves the use of an object, show the use of objects in the application of a rule or demonstrate the construction of something using the rule.	If the application of the rule can be effectively presented using still pictures, display a series of pictures illustrating the steps involved in applying a specified rule. Also illustrate the results of misapplying the rule.
Interest or Motivation Strategy	If you are trying to develop interest in certain types of objects, provide a display of the objects in the classroom or take students to where the objects are located in their natural environment.	If still pictures can clearly illustrate the object or event, use them in class to illustrate a discussion in which you encourage interest in a particular thing or behavior. Make the pictures and an audio tape discussion available for individual student use.
Attitude or Value Strategy	If the attitude or value involves an object, discuss the objects in class and make available for individual study. Provide written or audio tape commentary for individual student use with the object.	If the attitude or value could be effectively illustrated using still pictures, use overhead transparencies, slides, filmstrips, along with other audio and written media for group and individual use.
Self-Paced Strategy	While demonstrating the skill, point out the relevant cues and indicate performance criterion.	Project or display a series of still pictures illustrating the key points of the skill. Make picture sets available with written or tape recorded commentary for individual use.
Mixed-Paced Strategy	While demonstrating the skill in normal and slow motion, point out the relevant cues and indicate criterion for performance	Project or display a series of still pictures illustrating the key points of the skill. Make the pictures available with written or tape recorded commentary for individual use.
Externally-Paced Strategy	While demonstrating the skill in normal and slow motion, point out the relevant cues and indicate criterion for performance	Project or display a series of still pictures illustrating the key points of the skill. Make the pictures available with written or tape recorded commentary for individual use.

Figure 2 Continued

MOTION PICTURES	AUDIO MEDIA	WRITTEN WORDS & SYMBOLS
If the object or part of the object should be viewed in motion, show motion pictures or film clips while verbally naming the object or parts and describing their function and characteristics.	If an audio stimulus is to be named, present the sound or voice and tell the students its name and describe its characteristics.	If written words and symbols are to be named or associated with other words and symbols, provide the name or association while displaying the word or symbol.
If motion or a dramatic portrayal is required, show a series of film clips illustrating specific events, episodes, relationships, or sequence. Also give the names, descriptions or sequence of steps.	If particular sounds are an important part of the event, present a recorded or a live presentation of the required sounds. They should be presented as vividly as possible and with the names and necessary descriptions.	If the event would most efficiantly be illustrated through written words, recount the event and provide statements that will motivate students to practice.
If motion is a relevant attribute of the object or if a dramatic portrayal of the event is important, provide motion pictures or film clips for student viewing. Point out the relevant attributes.	If sounds are relevant attributes of the concept, have students listen to either a live or recorded presentation of the example sounds along with non-examples. Point out the differences between examples and non-examples.	If the concept is abstract and could adequately be presented with written materials, provide examples and non-examples in the form of short written descriptions or situations.
If the application of the rule involves motion or could best be illustrated in a dramatic situation, use short film loops or sections of films to illustrate the steps involved in applying a rule.	If the application of the rule could be presented using audio media, record conversations, dramatic situations, or descriptions that illustrate the application of the rule.	If the application of the rule involves mathematical or other symbols, provide short written situations or problems showing the step-by-step application of the rule.
Using stop action, slow motion, and normal speed, provide short film sequences demonstrating the skill.	Point out key points and offer performance tips during a demonstration or the viewing of still and motion pictures of the skill.	Provide descriptive materials for motivation and make available performance checklists during the demonstrations.
Use films or film clips utilizing stop motion, slow motion, and the normal speed while pointing out the relevant cues and criteria.	During a demonstration or while using still or motion pictures to illustrate the performance of a skill, call attention to the key points and offer performance tips.	Provide checklists for students to use while they are observing the demonstration of the skill.
Use films or film clips utilizing stop motion, slow motion, and the normal speed while pointing out the relevant cues and criteria.	During a demonstration or while using still or motion pictures to illustrate the performance of a skill, call attention to the key points and offer performance tips.	Provide checklists for students to use while they are observing the demonstration of the skill.
If you can locate one or more motion picture that provides a stimulating illustration of the subject, use them in class or make available on individual student basis.	Share your own enthusiasm for the subject in class and on an audio tape. Involve resource people in similar presentations. If the subject is primarily audio in nature, play recordings of representative materials as you discuss them.	If the subject is abstract and could be presented with written material, provide interesting descriptions and illustrations for individual study. Include written materials that share your own enthusiasm for the subject.
If the presentation of the subject of the attitude or value requires the dramatic impact of a motion picture, show and discuss a number of different relevant motion pictures over a period of time.	If the subject of the attitude or value is itself audio stimuli, or could be effectively portrayed through audio media, play and discuss records and tapes in class and provide recorded audio material for individual use along with other instructional media.	If information supporting the attitude or value can be properly presented using written materials, duplicate specially prepared materials for student use. Make available books, periodicals, along with a list of challenging questions with references noted.
After viewing a motion picture ask students to present correct order of events just seen or reorder them for another purpose	Record sounds on tape and ask students to order them appropriately for an event after they have been heard.	Ask students to place words or symbols in proper sequence to show correct flow of an event.

Other factors which ought to be considered in media selection come from the IDI model; i.e., the audience, the setting, and the other relevant resources which will be used. Some media, such as motion pictures, lend themselves to large-group instruction while others, such as programmed audiotapes, are designed for individual use. Time available may limit the use of certain media (60-minute television program), but permit the use of others such as magnetic audio cards for sound identification. When the actual location of use is known, the possibility of use can be assessed. For example, it is unsatisfactory to show slides in a room that cannot be darkened or to use a simple 21" TV receiver in a room holding 150 people. These physical factors do not play a major role in selecting media for the purpose of learning, but they must be considered before the final selection is made.

Further Factors in Media Selection

Once a medium has been selected, it is necessary to review several titles in that medium. For example, if the motion picture/television medium is selected, you would preview several titles that appear to fill your specifications. At this time, there are further criteria which you would apply.

Appropriateness.[4] If a teacher knows what to teach and what the student should be able to do, it should be possible to select a medium which helps the students acquire the new behavior which the teacher wants them to exhibit. For example, if the students are to identify faulty speech patterns and to correct these patterns, the students must be able to hear themselves. An audiotape recorder would be a good selection. A videotape recorder would be better if both hearing and seeing are essential to identifying and correcting speech patterns.

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[4]The authors gratefully acknowledge permission from Prentice-Hall, Inc., for the use of the material in this section which is from V.S. Gerlack and D.P. Ely, Teaching and Media: A Systematic Approach (pg. 292-297).

If an elementary school teacher wants children to describe the climate and vegetation of areas inhabited by the lion, showing a motion picture of the lion's habitat would probably be a logical selection. A trip to the local zoo might provide useful data about the size and appearance of the lion, but very little information about the natural habitat. There is probably no single criterion which is more important than appropriateness since the selection of the medium is tied directly to the objective(s) being sought.

Selection of the medium cannot be based on appropriateness alone. Once a medium has been verified as appropriate, it should be subjected to four other criteria: level of sophistication, cost, availability, and technical quality.

Level of Sophistication. While the content of an overhead transparency or a filmstrip might be highly appropriate to the implementation of one's objectives, the treatment or level might obscure its usefulness. Many commercially prepared materials are, unfortunately, aimed at a wide range of grade levels so that there is a potentially large market for the product. One should examine the level of sophistication, the vocabulary, the rate at which content is presented, the type of visualization, and the approach to subject matter in an effort to make certain that the material is suited to the age group with whom it is to be used.

Several examples will assist in clarifying this portion of the paper.

Vocabulary. A motion picture portraying family life in India designed for junior high school social studies classes offered an excellent visual document for a college class in comparative religions, but the vocabulary level was far below that of the college sophomore or junior. The professor wisely turned off the sound track and personally narrated the film.

Rate. One of the characteristics of programmed instruction is the step-by-step development from one concept to the next. This is a painful process for some students who are capable of jumping in larger steps than the program is designed to permit. Perhaps there is a branching, rather than a linear, program which would accomplish the same objective more efficiently. If not, it is probably wise to seek out another medium, perhaps a good book, to accomplish the objective.

Cost. A high school social studies teacher is seeking resources for an introduction to the United Nations. It is possible to locate a wide spectrum of media which could be used to help students describe the organization of the United Nations Security Council, General Assembly, and Secretariat. A school can rent the film, Workshop for Peace, for about $7.50. The U.N. also sells a filmstrip, Structure for Peace, dealing with the topic for $3.00. There are large charts showing the organization pattern of the U.N. and overhead transparencies which could help any learner achieve the objective. But suppose every student has a textbook with the same charts and an explanation of the organization's operation? The economic question looms large when there are constant demands on school budgets. However, the economic argument should not deter teachers from specifying the optimum medium to accomplish educational objectives. Many an opportunity for learning can be lost simply because the least expensive method is employed.

Availability. A high school English teacher, while attending a summer institute at a university, heard John Ciardi deliver a brilliant lecture on current trends in poetic criticism. A videotape of the lecture was made by the university's audiovisual department. The following September the teacher inquired about the availability of the tape. The university said that they would duplicate the tape if the teacher would provide a blank tape. When this teacher checked with the school's library media center, it was learned that the school's videotape recorder and the university's unit were not compatible and that it would do no good to acquire the duplicate tape. Since it was not absolutely necessary to see the visual material in order to understand the lecture, an audiotape was considered and eventually used.

Some of the most appropriate materials, geared to the right student level, and within the price range of the school, simply are not available when needed. Other alternatives should be considered.

Technical Quality. A Spanish teacher wanted to provide authentic language experiences for advanced students. Radio broadcasts from Mexico could be monitored at night and recorded at that time for future use. A friend recorded several news broadcasts, a few singing commercials, and an interview. When the teacher auditioned the tape through headphones in the library media center it was quite adequate, but in the classroom the combination of a small speaker, a large room, and poor acoustics prevented its use.

A seventh grade science teacher discovered a set of slides in a catalog from a science supply company. Fortunately, the library media specialist was able to preview the slides before requesting purchase. Having previewed them, a decision was made not to purchase since many of the slides were out of focus and a number of them were black and white where color would have been more appropriate.

Artists can be creative or condescending in their attempts to visualize ideas. Overly slick, cute, or crude cartooning detracts from an otherwise good presentation. By the same token, abstract and overly subtle art work leads students down interpretive paths which may be incompatible with the primary objectives. One of the fallacies found in the world of instructional media is that "if an idea is visualized it is good, and if it can be visualized it should be." Sometimes visualization turns out to be merely the substitution of a poor medium for a good one. For example, an outline of a speech can be put on an overhead projector and projected on the screen. Or a poem from an anthology, which every student owns, can be placed on the chalkboard. The head and shoulders shot of a teacher lecturing can be put on television and distributed to 10 groups of 30 students rather than presented live to 300 in the auditorium.

Selection of an instructional medium cannot be made without a view to the use which this medium will have. Therefore, selection must be based on a consideration of how the medium will be used in actual instruction.

CONDITIONS FOR SUCCESS

Most successful educational programs, when analyzed, prove to be highly complex and comprised of a number of components all of which must work together in a coordinated fashion. So far, this paper has dealt primarily with the aspects of technology, process, and strategy. In addition to these facets of a program, other crucial elements can be identified as interest, attitudes, values, interpersonal relationships, and commitment. In many ways, these later aspects can prove to be more critical for the success of a program than the technology and process.

One of the most important pre-conditions for developing a strong program in instructional design is that there be a commitment to this approach in developing instructional programs. This commitment must be made by the school districts administrative/supervisory staff as well as building level personnel. For without it, the process can never become totally effective.

From the outset, it must be stated that library media personnel cannot and should not take the sole responsibility for instructional design. One person does not possess all the needed skills. There are certain conditions that are pre-requisite and make success possible. First, the school district must be philosophically committed to this accountable approach to learning. The district must have overall goals and objectives and a mission which is consonant with and encompasses the goals of the library media program. This is essential for providing the framework within which a library/media supervisor can work. Second, these goals and objectives must not only be stated but must also be implemented. A program must be built on action, not on words alone. Third, in an even broader context the state mandates for education must include and support the philosophy of media and library media services. Fourth, the school board and the administrators must be knowledgeable about library media programs, and must be committed to implementing viable programs. They must be willing to allocate resources and personnel. In addition, they must encourage principals and other supervisors to support the media philosophy and program.

In addition to this pervasive commitment to the program, positive attitudes toward all facets of the plan must be developed by administrators, supervisors, and library media personnel. A spirit of cooperation, enthusiasm, and positive inter-personal relations are essential to having the plan function with optimum effectiveness.

A basic premise on which this type of program operates is that there must be coordination and cooperative planning among a number of people, particularly specialists on subject fields and curriculum supervisors in addition to the media personnel. This means that the director of the library media program must be able to participate as a contributing partner bringing a background of both knowledge and skills. The director must have good background knowledge in diverse subject areas and, above all, know where to locate materials to meet the information needs of teachers and students. To work under these circumstances, it is imperative that library media personnel have great sensitivity to others and practice good human relations. Library media personnel cannot afford to convey the aura that he or she is the only knowledgeable person in curriculum and knows the only way to proceed. Others on a curriculum team may have priorities of their own, so tolerance, understanding, and flexibility are paramount.

In addition, library media personnel must be thoroughly familiar with the process of instructional design in order to contribute as an active participant and not just "be there" as a passive resource.

An additional characteristic that appears to be essential for success is that library media personnel must remain flexible and be receptive to change.

As one reviews the recent technological developments in library media programs and the role of library media personnel, it appears that the only thing that remains constant is that there is continuous change. There are few other jobs, even in education, that have undergone so much change or have demanded such flexibility. The functions performed in a library media program are no longer just the acquisition, storage, and retrieval of materials but are expanded to include:

Organization Management - to plan, establish, and maintain the policies and procedures for the operation of a media service

Personnel Management - to hire, interact with, and supervise the media service personnel

Design - to develop a plan for teaching and learning which takes into account as many variables as possible (such as media, people, content, method) and orders them in a systematic fashion. The purpose of design is to assist teachers and learners to achieve stated objectives in the most effective and efficient manner.

Information Retrieval - to organize knowledge and to order information in all formats in a systematic fashion for the purpose of making the information accessible to the user

Logistics - to arrange the mechanics of acquisition, storage, retrieval, distribution, and maintenance for information in all formats

Production - to design and create an instructional product

Instruction - to communicate information to defined audiences

Evaluation - to examine and judge the worth, quality, and significance of specific media and programs of instruction

Research - to generate and test theory; it is inquiry, examination, or experimentation having for its aim the discovery of new facts or their correct interpretation (in this book, as related to the use of media in the context of teaching and learning)

Utilization - to employ media for the purpose of achieving individual and group objectives[5]

Social changes are also exerting continuing pressures in education which influence instructional planning or design.

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[5]Margaret E. Chisholm and Donald P. Ely, Media Personnel in Education: A Competency Approach (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1976), pg. 43,44.

Some social changes have had a direct influence on facilitating the instructional design process. Great impetus in this direction came from rapid expansion in the range of audio and visual resources. Closely tied to this are the significant technological developments in both hardware and the qualitative development in software.

Currently, the changes that are taking place cannot be ignored. One pervasive change is budget retrenchment. Most school districts are expected to do more with less. Coupled with this is the wave of unionization. In many places teachers and/or supervisors will no longer serve on planning teams or committees without extra compensation. This could have some good long-range effects, but it is a condition that must be recognized.

There are profound changes in the expectations of the parents and administrators. Many parents are champions of the theme "Back to Basics" and they will not approve of those programs or services that appear to be "extras."

Additional changes have come in the area of personnel, as many schools have cut back in the number of supervisors in special areas such as art, music, and physical education. As a result of this change, library media personnel must adapt to working with curriculum generalists and with aides. So the question remains as to how library media personnel can accommodate to these changes and still move forward programmatically.

There is no substitute for continuous patience and understanding. It is essential that library media personnel have the opportunity to participate in professional meetings at the local, regional, and national levels in order to share ideas and attempt to cope with the constant changes. Inservice education and continuing education opportunities and appropriate professional literature are more critically needed than ever.

All of these considerations seem to culminate in the questions: First, what is the compelling rationale for school library media personnel accepting the responsibility for instructional planning? Second, what is the role of school library media personnel in this program?

The idea that school library media personnel should be involved in curriculum planning is certainly not a new one. For many years professional literature has espoused this concept and encouraged the participation in curriculum development. So what is new about this "changed" current concept? Two things appear to be different; first, instructional design is a very precise and specialized process which provides accountability and offers the opportunity to achieve educational goals. Therefore, as a concept, it is quite different from the general term curriculum planning. The second change that provides the rationale for the involvement of school library media personnel in instructional design is that future survival of library media programs may be dependent upon it. It appears that instructional design is a process which provides opportunity for the materials and services of a library media program to be used in an optimum manner and thereby demonstrates its continuing value as a major educational program.

Ideally, the role of the director/supervisor of the library media program would be to initiate a program of instructional design and provide the ongoing leadership. However, every situation is different and the configuration of persons responsible for curriculum development may be such that library media personnel, for very pragmatic and diplomatic reasons, can only play active supporting roles. Where no steps have been taken to start such a program, careful assessment of the situation must be made. It may be that seminars or institutes will need to be offered so that all personnel can gain the skills necessary. It may be wise to begin on a very limited scale. It is important to remember that the process of instructional design can be applied to develop a single class session, a series of class sessions, a unit, a cluster of units, a course, a sequence of courses, a complete subject area curriculum, or even a degree program at the college level.

It is quite simple to identify obstacles to the implementation of instructional design, or even to find trends that make the implementation more difficult. For example, the process of instructional design can be costly as it requires time, staff, and equipment. This can pose grave problems during times of financial cutbacks. Bibliographic control of media for purposes of acquisition and location is still in a developing stage. This makes it difficult to identify and locate audio and visual materials in all formats.

In addition, audio and visual materials have not been evaluated adequately to give assistance in acquiring these materials. Closely related to the evaluation of the content and appropriateness of materials is the problem of validating materials as they are used. Validation means that after materials are carefully selected, then they are used by the student. Validation occurs when an assessment is made to determine whether or not the materials assisted the student to reach the expected goals. This process is exceedingly complex and demanding for, if the materials prove to be inadequate or inappropriate, they must be revised or replaced.

Another great difficulty that must be faced is that instructional design is not only costly in terms of dollars, but it also requires staff time to develop and implement; it requires equipment and software. To meet these overwhelming time and budget demands, some educators attempt to use modules developed by someone else. In some cases this practice can work satisfactorily but, usually, the best successes come from modules designed in response to a particular need.

A further complication is that more and more is constantly being discovered about the learning process. From a positive perspective, one would expect that all these new discoveries could be readily applied but, as more is revealed about the learning process, it is proving to be more complex than previously thought. So the more we learn about learning, the more formidable and complex the task becomes. Therefore, it is most reasonable to use instructional design so that the most logical, systematic approach can be used which is known to result in the achievement of educational goals.

In summary, the role of library media personnel is to understand the instructional design process thoroughly, foster positive and supportive attitudes, work cooperatively with all other team members, remain flexible, and yet provide maximum leadership. The positive educational results reached through instructional design are so important that the future of the library media profession may depend upon the skill and effectiveness with which the program is implemented.

MIDDLE SCHOOLS: A NEW CHALLENGE TO SCHOOL LIBRARY MEDIA PROGRAMS?

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PROGRAMMING FOR MIDDLE SCHOOLS AND THE RELATIONSHIP OF PROGRAM TO THE SCHOOL LIBRARY MEDIA CENTER

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I. Background and Rationale for the Middle School

A. The Junior High School

The junior high school program was established in the early 1900's by taking grade nine from the high school and combining it with grades seven and eight from the elementary school. The goals of the junior high school were to provide a transitional school between the elementary and high school and to help youngsters bridge the gap between childhood and adolescence. Had the junior high achieved its goals, there would have been no need for reorganization of a middle school except for the fact of early maturation of students. The junior high failed in its intent because it was a junior high school. It still had the Carnegie units, the specialization and departmentalization, the rigid schedule, and other characteristics of the senior high school. A program designed for adolescents was essentially forced upon a younger group of children. Teachers had little understanding of pre- and emerging adolescent learners and were not specifically trained to work with that particular age group.

B. The Middle School Movement

The middle school movement is the direct result of dissatisfaction with the traditional junior high school.

The middle school is defined as a transitional school concerned with the most appropriate program to cope with the personal and educational developmental needs of emerging adolescents. The middle school should be an institution which has:

"1. A unique program adapted to the needs of the pre- and early adolescent student.

2. The widest possible range of intellectual, social, and physical experiences.

3. Opportunities for exploration and development of fundamental skills needed by all while making allowances for individual learning patterns. It should maintain an atmosphere of basic respect for individual differences.

4. A climate that enables students to develop abilities, find facts, weigh evidence, draw conclusions, determine values, and that keeps their minds open to new facts.

5. Staff members who recognize and understand the student's needs, interests, backgrounds, motivations, goals, as well as stresses, strains, frustrations, and fears.

6. A smooth educational transition between the elementary school and the high school while allowing for the physical and emotional changes taking place due to transescence.

7. An environment where the child, not the program, is most important and where the opportunity to succeed is ensured for all students.

8. Guidance in the development of mental processes and attitudes needed for constructive citizenship and the development of lifelong competencies and appreciations needed for effective use of leisure.

9. Competent instructional personnel who will strive to understand the students whom they serve and develop professional competencies which are both unique and applicable to the transescent student.

10. Facilities and time which allow students and teachers an opportunity to achieve the goals of the program to their fullest capabilities."[1]

II. The Middle School Child

A. Physical Development

In transescence, the stage of development which begins prior to the onset of puberty and extends through the early stages of adolescence, pronounced physical changes occur in boys and girls. The growth pattern is usually the same for all girls and boys but there are wide variations in the timing and degree of changes. Girls develop faster than boys; however, the sequential order in which development occurs is relatively consistent in each sex. Bone growth often is faster than muscle development and results often in poor body mechanics and lack of coordination in many youngsters. The growth patterns of transescence are unlike those of any other age level.

The acceleration and unevenness of physical development and physiological change in transescence have many emotional and psychological effects on middle school youngsters.

B. Social Development

A child's social development may be defined as the ability to adjust to those around him. During the transition from childhood to adolescence the emerging adolescent is reaching for independence. He/She begins to question adult authority and conflict between dependence and independence in the family structure occurs when the pre-adolescent begins to shift his/her loyalities to peers. Parents and adults often have difficulty understanding the emerging adolescent's striving for peer acceptance. Yet when peer acceptance and pressures are the greatest, emerging adolescents still desire strong family structures and adult authority. The first steps into an adult world are shaky, to say the least, and middle school youngsters want understanding adults to lean on in times of need.

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[1] The Middle School We Need, A.S.C.D., 1975.

C. Emotional Development

Transescence is a time of emotional turmoil. The pre-adolescent is a study in ambivalence between sophistication and childishness. Rapid change in mood is typical of youngsters traveling the road from childhood to adolescence. Coping with physical changes, especially sexual development, endeavoring to gain independence from family, learning to manage a new mode of intellectual functioning, and becoming a person in his or her own right all are emotion-laden problems. At no other time in life is an individual likely to encounter such a diverse number of problems simultaneously.

D. Intellectual Development

Mental growth is concurrent with physical maturation and cognitive maturation of transescents is highly variable from one student to another. Around the onset of pubescence, most transescents begin to carry out formal as well as concrete operations. Through the efforts of Jean Piaget and others, we now have a better understanding of the cognitive development of children. Piaget suggests that cognitive development is a progression through periods or stages. The stages are sequential and invariant in their sequence. The 10-11 year olds in Piaget's system are entering a period of greater ability to use abstract reasoning and are much different from children in the lower elementary years.

Practically all youngsters between 10 and 14 are making progress in intellectual development but the gap between the good student and poor student continually widens. Thus it is at this period in a child's development when chronological age should be of least importance and each child should be allowed to travel toward his/her goal at his/her own rate of educational growth. Nowhere in schooling is an individualized program more necessary than during the middle school years.

E. Achievement Differences

Achievement differences are greatest in the middle years. Often, we find youngsters in the same grades who are many grades apart when comparing achievement in subject areas.

In describing the middle school child, the key word is diversity. Each child is maturing in his or her own way and in his or her own time. Awareness of the physical, social, emotional, and intellectual changes of middle school pupils and the diversity of the changes suggests that the "typical child" does not exist and we should plan the curriculum accordingly.

III. The Middle School Program

The great range of differences found in middle school youngsters demands a broad and relevant program be developed for those youngsters. The uniqueness of each middle school makes it imperative that the curriculum be developed to fit the needs of the youngsters it serves. Community expectations, buildings, available teachers all must be considered; however, they are all secondary to the need of the students themselves.

A well balanced program focusing on personal development, emphasizing skills for continued learning, and utilizing knowledge to foster social competence are essential if we are to serve the diverse group of youngsters found in the middle grades. A patchwork approach as used in the junior high school is not needed. What is needed is a program that reflects the nature of the age group served by the middle school.

A good middle school program should provide:

"1. Learning experiences for transescents at their own intellectual levels, relating to immediate rather than remote academic goals.

2. A wide variety of cognitive learning experiences to account for the full range of students who are at many different levels of concrete and formal operations. Learning objectives should be sequenced to allow for the transition from concrete to formal operations.

3. A diversified curriculum of exploratory and/or fundamental activities resulting in daily successful experiences that will stimulate and nurture intellectual development.

4. Opportunities for the development of problem-solving skills, reflective-thinking processes, and awareness for the order of the student's environment.

5. Cognitive learning experiences so structured that students can progress in an individualized manner. However, within the structure of an individualized learning program, students can interact with one another. Social interaction is not an enemy of individual learning.

6. A curriculum in which all areas are taught to reveal opportunities for further study, to help students learn how to study, and to help them appraise their own interests and talents. In addition, the middle school should continue the developmental program of basic skills instruction started in the elementary school, with emphasis upon both developmental and remedial reading.

7. A planned sequence of concepts in the general education areas, major emphasis on the interests and skills for continued learning, a balanced program of exploratory experiences and other activities and services for personal development, and appropriate attention to the development of values.

8. A common program in which areas of learning are combined and integrated to break down artificial and irrelevant divisions of curriculum content. Some previously departmentalized areas of the curriculum should be combined and taught around integrated themes, topics, and experiences. Other areas of the curriculum, particularly those concerned with basic skills which are logical, sequential, and analytical, might best be taught in ungraded or continuous progress programs. Inflexible student scheduling, with its emphasis upon departmentalization, should be restructured in the direction of greater flexibility.

9. Encouragement of personal curiosity, with one learning experience inspiring subsequent activities.

10. Methods of instruction involving open and individually directed learning experiences. The role of the teacher should be more that of a personal guide and facilitator of learning than of a purveyor of knowledge. Traditional lecture-recitation methods should be minimized.

11. Grouping criteria which involve not only cognitive but also physical, social, and emotional criteria.

12. As much consideration for who the student is and becomes, his or her self-concept, self-responsibility, and attitudes toward school and personal happiness, as for how much and what he or she knows.

13. Experiences in the arts for all transescents to foster aesthetic appreciations and to stimulate creative expression.

14. Curriculum and teaching methods which reflect cultural, ethnic, and socioeconomic subgroups within the middle school student population."[2]

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[2]The Middle School We Need, A.S.C.D., 1975.

IV. Staff Needs

"A successful middle school depends more upon faculties than upon facilities, more on people than upon the purse."[3]

The middle school teacher must have those characteristics that research indicates are good for all teachers. However, he or she is responsible for children in the ages embraced in the middle school who are striking in their diversity. What the teacher confronts in the middle school is a rapidly changing mixture of children in different stages of development. The better the staff is prepared to work with youngsters of this age, the greater the likelihood of the success of the middle school. Teachers trained for the high school who are interested only in adolescents or elementary teachers interested only in younger children have no place in the middle school. Since the school in the middle is neither elementary nor secondary and since the students it serves comprise a distinct group with needs that are different from the needs of elementary or high school students, it is vital that we hire a separate staff that is trained for and committed to the "in-between-ager."

The middle school demands an administrator who can give full-time attention to the youngsters and staff in the middle grades. The unique needs of a diverse group of youngsters requires an adult who can respond to critical problems needing immediate attention.

"Support personnel are essential to the success of a middle school."[4] However, they must be under the direction of the building administrator. Personnel who are scheduled in and out of a school program by those other than the building administrator often restrict the flexibility so needed in the middle grades.

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[3]Developing Middle Schools, Joseph Bondi, 1972.

[4]Development of Middle Schools in Florida, State of Florida Middle School Committee, Joseph Bondi, 1975.

Planning programs for middle school learners necessitates involvement of lay people since the middle school is really their school. Lay persons can become not only excellent resource persons in the classroom, but also can influence change, improve the quality of education, and stimulate local support of the middle school program.

V. Organization of the Middle School

All schools consist of five variables--students, teachers, time, space, and media. The skillful manipulation of these variables allows middle schools to provide the flexible program and organization necessary for the diverse group of youngsters they serve.

"For years schools have operated under the following assumptions:

1. The appropriate amount of time for learning a subject is the same uniform period of length, 40 to 60 minutes in length, six or seven periods a day, for 36 weeks out of the year.

2. A classroom group size of 30-35 students is the most appropriate for a wide variety of learning experiences.

3. All learners are capable of mastering the same subject matter in the same length of time. For example, we give everyone the same test on Chapter Five on Friday. We pass everyone from level one of algebra to level two when June comes.

4. We assume once a group is formed the same group composition is equally appropriate for a wide variety of learning activities.

5. We assume the same material is appropriate to all members of a group. For example, we give the same assignment to the entire group.

6. We assume the same classroom is equally appropriate for a wide variety of learning activities. Conference rooms are not provided for teacher-student conferences. Large-group facilities are not provided for mass dissemination of materials. Small-group rooms are unavailable for discussion activity, etc.

7. We assume all students require the same kind of supervision.

8. We assume the same teacher is qualified to teach all aspects of his/her subject for one school year.

Operating on these assumptions, we have locked students into an educational eggcrate with 30 students to a cubicle, from 8 a.m. to 3 p.m., five days a week for 12 years. In short, schools operating under these assumptions existed more for the convenience of teaching than for the facilitation of learning.

The middle school seeks to break this lockstep approach to instruction. Rigid class sizes, rigid classroom facilities, and rigid schedules are being challenged. Many middle schools are returning to the small-school concept (school within a school) where teams of teachers work with groups of students on a flexible basis.

These schools have adopted the position that there is nothing magic about a set number of hours, days, or weeks a child spends in a particular course. Emphasis is placed on designing facilities and schedules to allow for a variety of group sizes which are determined by the nature of the learning activity. A child's learning progress is determined by mastery of behavioral objectives. Students under this performance criteria do not pass on to a second learning level until they have mastered first-level objectives. By involving students with teachers in planning a course of study, students are asked to assume more responsibility for their own learning."[5]

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[5] Developing Middle Schools, Joseph Bondi, 1972.

VI. The Role of the Library Media Specialist in the Middle School

The library media specialist in the middle school is a key figure in the instructional program. Middle schools, by their nature, involve students in a wide range of learning opportunities. Students in the middle grades are curious. They like to explore and the library is an excellent place to do just that. Books provide escape and needed relief from the pressures of a grown-up world. Stories about sports stars, war heroes, and first loves appeal to the transescent. Students like to experiment with media such as super-eight cameras, slides, filmstrips, video-tape equipment, and records. Many library media specialists encourage students to create stories, plays, drama with super-eight film, slide tapes, and videotapes. Students must write scripts, organize filming, and edit their product.

The media library specialist in the middle school has a close relationship with teacher teams. By participating in planning sessions with the team members, the media person can be a resource person for materials, help develop new materials, and participate in the instruction in the classroom or library. Many teacher teams develop interdisciplinary learning units that require extensive student participation in the library media center. Students participating in the units often become involved in the instruction as peer teachers.

All of the competencies identified for good middle school teachers certainly apply to middle school library media specialists. Understanding the age group found in the middle grades is the most important characteristic of adults working in the middle school. Those adults who understand middle school students and like to work with that challenging group will be able to apply their talents in constructive ways. The library-media specialist who is aware of the unique nature of the age group found in the middle grades can create a learning environment that is exciting, warm, and inviting. The library media specialist is indeed a key figure in the total program of the middle school.

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PERSONALIZING INSTRUCTION FOR THE MIDDLE SCHOOL LEARNER--

THE INSTRUCTIONAL ROLE OF THE SCHOOL MEDIA SPECIALIST

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Recently, someone asked me "What's so special about school library media specialists?" I'd like to begin this presentation by asking you this same question. Of course, as school library media specialists, we know the answers. There are many, many qualities, competencies, skills, and abilities that set school library media personnel apart and make us especially important in today's educational process. Perhaps another question is of greater importance--Do other educators and administrators realize the unique skills and talents that a library media specialist can offer as a member of the teaching team in a middle school?

If Bill Alexander, an outstanding educator in middle school education, were here, he would answer the question this way:

> Media specialists or possibly <u>paraprofessionals</u> would have to be involved with the teaching teams during the early stages of unit planning. They would know what is available and at the proper time, assemble the team designated materials on carts and get them to the work/study areas. They would also assist with usage of materials while in work/study areas and reshelve the materials in the central depository when the team is finished with them.[1]

Is this a typical perception of the role of the library media specialist? I would have to say that this might even be called an enlightened perception by some. However, as this perception is examined closely, it turns out to be chiefly a reactive role for the library media specialist.

When asked, this person develops a bibliography, gets the materials together, gets the student to the work area, does some reading, listening, and viewing guidance if the opportunity presents itself, and then reshelves the material. Is this the role that you want to play? Partly . . . but is this the best, most effective use of your unique talents and skills? In order to arrive at my answer to this question and then to point out some strategies for achieving your unique potential as a member of the instructional team, I will focus the rest of this presentation on the following:

First, I want to reemphasize briefly some of the characteristics of the middle school that Dr. Bondi discussed. I feel these characteristics have special implication for influencing the library media specialist's role.

Secondly, I want to define specifically what I see as the instructional role of the library media specialist and to use a research project that I worked on in this area to demonstrate the implementation of this role.

Finally, I want to outline some ways in which a library media specialist or a library media supervisor might more actively promote this role within a school building or the school district level.

Let us look briefly at some of the characteristics of the middle school that are especially pertinent in determining what various faculty members will do in the instructional program. In essence, the central goal of the middle school is to help students move forward continuously at their own rate of learning. Here we see a major focus on taking all students where they are and providing individualized learning activities to move them on to a higher level. If this goal is to be realized, this would obviously require many mediated activities occurring simultaneously. The emphasis is always on the individual student and on freedom within the instructional environment to develop individual interests and learning styles. Within an environment which stresses these goals, some of the basic skills of continuous learning which are important to the middle school child are listening, viewing, reading, critical thinking, communicating, knowing how to identify and use available resources, organizing information, making generalizations, evaluating information, and problem solving. In other words, the way a child learns and what is learned assume equal importance in a middle school. The process of learning receives an emphasis that is not as apparent at some other levels. This idea is an extremely crucial one

in determining the instructional role of the library media specialist.

If the middle school student is to be provided with the instructional environment that I have just described, the following must be present:

1. A system of selection and procurement of teaching materials which can meet the identified needs of students--

2. Physical planning which can insure proper access to all available materials on the part of both teachers and students--

3. Development of an ongoing system which helps teachers and students to utilize different media effectively--and

4. The development of a system which can provide adequate assistance for teachers and students in identifying both available and preferred media for each specific learning requirement.

In other words, we see the need for a system for getting the right materials, when they are needed, where they are needed, and then making sure that they are used effectively to meet individual student needs as learning needs arise.

How does the library media specialist fit into this system? Some people would say the library media specialist has a peripheral role. These people manage to divorce the library media specialist, for all intents and purposes, from the effective use of media. They tend to think in terms of the things rather than the services of the library program. For example, the Individually Guided Education process used in many middle schools speaks of the use of media throughout the instructional sequence but does not speak in any detail about the instructional role of the library media specialist. Even in a program with emphasis on meeting individual needs of students, many people seem unclear about what the library media specialist has to offer to the successful implementation of an individualized instructional program.

To determine accurately what the library media specialist has to offer, one must start by examining what is required in a program of individualized instruction. Basically, this type of program requires the use of many different types of appropriate materials and activities simultaneously. Consequently, the teacher who attempts to individualize instruction accepts the necessity for making available a variety of effective learning alternatives to help students achieve each instructional objective. Conceivably, if a teacher had 30 students in the class, ways must be found for accommodating the different levels of achievment, learning styles, interests, and other educational needs of each of those students in order to individualize instruction. Hence, the teacher's role shifts from one of purveyor of knowledge to a manager of instruction whose chief responsibilities are to provide and prescribe suitable learning alternatives at the appropriate time.

In order for the wide range of learning alternatives to be made available for classroom and individual student needs, the following tasks should be performed:

1. Identification, selection, and evaluation of materials and other resources according to student needs and concepts being taught;

2. Production of needed materials not available commercially;

3. Organization of resources so that they can be obtained by students in forms required when and where they are needed; and

4. Production of student materials to enhance and broaden their learning experiences through direct involvement.

The big question then becomes "Can teachers generally perform all these necessary activities which are at the heart of an individualized instructional program?" When these essential ingredients are analyzed in terms of expertise, time, and inclination toward the use of media, and when other duties and responsibilities assigned to the teacher are also considered, the enormity of the job moves beyond the capabilities of any one classroom teacher.

Many teachers simply lack the time, expertise, and inclination to offer the variety of media-oriented experiences necessary to personalize instruction. This may be the result of a teacher's preservice training which focuses on learning the content of the desired teaching area rather than mastering the processes of communicating the content. Consequently, the teacher becomes a content specailist, but many times has little experience in utilizing techniques such as selecting and using films effectively, helping students produce photographs to improve visual literacy, and other activities of this nature. Further, time constraints severely limit the teacher's ability to produce, evaluate, and carefully select much of the media which have potential value for learning alternatives in the classroom.

Recognition of the magnitude of these problems by many educators has led to the exploration of alternatives aimed at combining the content expertise of the classroom teacher with the communication skills of other specialists in the school to form a stronger teaching team. Within this context, the unique skills of the library media specialist are being acknowledged increasingly as essential ingredients in an instructional program focused on meeting the individual needs of the student.

But in real terms how does the complementary instructional role of the school library media specialist work? What happens when the expertise of the materials specialist and the teacher are combined to individualize instruction in the middle school?

A research team of which I was the director asked that question during a research project in a middle school in Florida during the 1974-75 school year.[2] This project placed a library media specialist on a teaching team full-time for a year. This library media specialist had the responsibility of helping teachers on that team to individualize instruction through the use of her unique media skills. The individually-guided education model for instructional planning was used to guide the interactive process between teachers and the library media specialist. Specifically, the team library media specialist ensured the inclusion of process objectives related to methods of communication more effectively; i.e., to become a dis-

criminating viewer. She also performed the following for the team:

a. Offered logisitical support in scheduling and use of learning alternatives;

b. Performed materials analysis based on student learning styles;

c. Suggested various ways in which concepts might be presented to students more effectively based on their learning orientations;

d. Helped teachers to determine the types of student learning styles which were already being accommodated by the materials and approaches included in a unit;

e. Contacted district library media staff to obtain additional services for developing team learning alternatives which could not be produced in the school, but not generally for such things as making out film orders and other clerical duties;

f. Supervised the production of materials required for learning alternatives;

g. Suggested materials for the media collection needed by the team which should be ordered by other members of the library media staff;

h. Shared information about new educational and media developments with other teaching team members;

i. Engaged in continuous evaluation of learning alternatives based on feedback gained from observation, interaction with students about their learning alternatives, and discussion with other team members;

j. Assisted in field tests of learning alternatives with representative students in the school;

k. Worked with other members of the library media team, including clerks, to secure equipment, materials, and services required for learning alternatives.[3]

As the months passed in the Fort Clarke project, the priorities of the team library media specialist became the evaluation of materials and activities and the planning of learning strategies based on these materials. The other two professional library media specialists in the school played a large part in the success of the library media specialist on the teaching team by providing necessary instructional support for the team.

This interaction between the library media specialist and the teaching team and the team library media specialist and those library media professionals based in the library media center can be seen in the flim entitled The Essential Ingredient produced by the Florida Department of Education and based, in large part, on this project. Part of the film also deals with an elementary school but I think that you can get a good idea of the instructional role of the library media specialist as we perceived it by looking at this film.

THE ESSENTIAL INGREDIENT
(was shown at this point in the oral presentation)

At this point most of you are probably saying, "That looks good," but let's be realistic. That ratio between library media specialists and students and teachers doesn't exist. For those of you who have a limited staff, I have developed some guidelines which, I believe, will help you become more involved in a curricular role in the middle school.

1. Educate your principal and teachers about the role that you can perform on the teaching team, and let them know what resources are required to allow you to act in this role. Do not assume that they are already aware of the benefits to be derived from allowing the library media staff to function in this role.

2. If your resources are limited and you want to demonstrate effectively the meaningful contribution you can make in the curricular area, select a teacher who has exhibited a positive attitude toward library media services and work intensively with that teacher. It is extremely important to experience success in this first instance, since this effort will provide the impetus for other teachers to request the same kind of service.

3. Become a member of the school's curriculum committee and participate in a variety of ways, such as offering suggestions about materials to be considered and information on recent curricular developments which relate to the area being discussed.

4. Do not try to provide the full range of library media services to everyone if you have limited resources. Instead, use your resources most effectively to achieve your top priorities and then focus your attention on those activities. If your efforts become too diffused in an attempt to provide library media services to all users at some level, your program will suffer and people will regard your area as incidental to the educational program.

5. When asking for additional resources, always relate your request directly to the benefits which will be experienced by students in the classroom.

6. Be careful about criticizing the teachers with whom you are working. Some teachers feel very insecure in this cooperative role; they may need continued positive reinforcement.

7. Do allow yourself a realistic time line when working with teachers. It is not uncommon to need four to six weeks lead time to have materials locally produced as well as to offer a desired inservice training program, coordinate the logistical arrangements for materials and equipment, locate, acquire, and evaluate materials which may be appropriate for the unit, and perform other instructionally related similar tasks.

7. Continued
It is better to give teachers a reasonable estimate of the time required to complete responsibilities than to disappoint them with inadequate products or no products at all.

8. Be flexible about meetings with teachers. If possible, meet when and where they can. Their planning schedule may not conform to or be limited to their planning periods during the school day.

9. Use your communication skills constantly to inform people in the school of the potential of your program, the resources required to reach that potential, and how this will assist them in fulfilling their instructional responsibilities.

10. Study texts and other curricular guides used in the classroom to obtain basic information about curricular directions in specific courses.

If you are a district library media supervisor interested in promoting this role, some of the following may improve people's awareness of the instructional function of the library media specialist:

1. Help library media specialists with whom you work to overcome any hesitancy that they may have performing in this kind of role. The role looks good on paper, but is very scary for some library media specialists in actual practice.

2. Work with library media specialists in a variety of inservice activities planning realistic strategies which will assist other educators to understand the benefits of a library media program.

3. Take principals and others to schools in your district where library media specialists are working effectively in this role, and then plan ways these educators can obtain similar services in their school. There is much value in letting people see what you are talking about when you are attempting to broaden their perceptions.

4. Get on county curriculum-related committees where you can make others aware of this role.

5. Get other educators to speak about the benefits of this role to them and to the students they teach.

6. Support the teaching of the role of the library media program in preservice teacher education programs and in training programs for administrators.

7. Encourage library media specialists to share their ideas in this area with other library media specialists.

These are only a few of the things that you can do, and probably are doing in many cases, to promote this important role. The question then becomes "What will be the results of these efforts?" I would like to close by presenting you with one man's answer. According to the principal of the Fort Clarke Middle School, who was not at all sold on this instructional function at the beginning of the research project:

> Measurable results may not be significant but, to this principal, the results that insure the success of a school have been provided by this project beyond all of his hoped-for expectations--the catalyst that cannot be pulled from professional journals or implied by education professors--an unusual library media specialist plus a highly competent team plus a funded idea plus confidence by school and project administrators equals better prepared students. What is a more worthwhile goal in education?[4]

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[3] Ibid, pg. 8-9.

[4] Ibid, pg. 58.